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(54) Title: BRIGHT AND FAST NEUTRON SCINTILLATORS

(57) Abstract: The invention pertains to a neutron detector comprising a scintillating material of the generic formula  $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{X}_6 : x\text{Ce}^{3+}$ , where X is either Br or I, Ln is Y or Gd or Lu or Sc or La, where z is greater or equal to 0 and less or equal to 2, and x is above 0.0005, generally under the form of monocrystal. The scintillating material has a remarkably low decay time.



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